



FACILITY PERMIT TO OPERATE TESORO REFINING & MARKETING CO. LLC

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS
The operator shall comply with the terms and conditions set forth below:

Additions are shown as **bold** and underlined and deletions are shown as ~~strikeouts~~.

PROCESS 2		SYSTEM 2			
Coking and Residual Conditioning		DCU Heaters			
		Process Conditions: P13.1 System Conditions: <u>S11.X</u>			
Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
HEATER, H-100, PROCESS GAS, REFINERY GAS, 252, 302.4 MMBTU/HR WITH A/N: 469243, <u>567439</u> <u>BURNER, REFINERY GAS, JOHN</u> <u>ZINK, MODEL MA-20, 36</u> <u>BURNERS TOTAL , 8.4</u> <u>MMBTU/HR EACH</u>	D33	D76 D77 C768 S987	NOX: MAJOR SOURCE** ; SOX: MAJOR SOURCE**	CO: 2000 PPMV (5) [RULE 407,4-2-1982]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7- 1981] <u>NOX: 18.40 lbs/hr (2)</u> <u>[RULE 2005, 5-6-</u> <u>2005];</u> <u>SOX: 14.08 lbs/hr (2)</u> <u>[RULE 2005, 5-6-</u> <u>2005]</u>	New: <u>A63.XX,</u> <u>A63.YY,</u> <u>A99.X,</u> <u>A195.XX,</u> <u>A195.YY,</u> <u>D29.X</u> B61.1, D90.7, D328.1, E54.9, E54.17, H23.3
PROCESS 4		SYSTEM 7			
HYDROTREATING		FCCU FEED HYDRODESULFURIZATION UNIT NO. 4			
		Process Conditions: P13.1 System Conditions: <u>S11.X</u> , S11.2 , S13.2, S13.4, S15.2, S15.3, S15.10, S31.1, <u>S31.X</u>			
Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
<u>DRUM, DIESEL SURGE,V-3615,</u> <u>DIAMETER: 4FT HEIGHT:</u> <u>8FT6IN</u> A/N: 470277 <u>567619</u>	<u>DXXX1</u>				<u>L341. X</u>
<u>DRYER, DIESEL SALT, V-3618,</u> <u>DIAMETER: 13FT HEIGHT:</u> <u>15FT6IN</u> A/N: 470277 <u>567619</u>	<u>DXXX2</u>				<u>L341. X</u>



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REACTOR, GUARD, V-1740, HEIGHT: 21 FT 11 IN; DIAMETER: 12 FT 7 IN A/N: 470277 567619	D1195				
REACTOR, V-1741, HEIGHT: 31 FT 11 IN; DIAMETER: 12 FT 7 IN A/N: 470277 567619	D1326				
COLUMN, H2S STRIPPER, V-1755, HEIGHT: 59 FT 6 IN; DIAMETER: 10 FT 6 IN A/N: 470277 567619	D160				
FRACTIONATOR, V-1757, HEIGHT: 70 FT 6 IN; DIAMETER: 8 FT 6 IN A/N: 470277 567619	D168				
COLUMN, STRIPPER, V-867, DIESEL , JET FUEL , HEIGHT: 22 FT 8 IN; DIAMETER: 3 FT 6 IN A/N: 470277 567619	D244				
VESSEL, DRIER, V-1374, DIESEL PRODUCT, HEIGHT: 36 FT 6 IN; DIAMETER: 9 FT A/N: 470277 567619	D3				
ABSORBER, AMINE, V-1759, HEIGHT: 49 FT 9 IN; DIAMETER: 2 FT A/N: 470277 567619	D161				
ABSORBER, AMINE, V-1761, HEIGHT: 58 FT ; DIAMETER: 4 FT A/N: 470277 567619	D162				
DRUM, SURGE, V-1751, FEED, HEIGHT: 43 FT ; DIAMETER: 13 FT 6 IN A/N: 470277 567619	D163				



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ABSORBER, AMINE/COLD HIGH PRESSURE SEPARATOR, V-2231, HEIGHT: 42 FT ; DIAMETER: 4 FT 7 IN A/N: 470277 567619	D164				
DRUM, FLASH, RICH AMINE, V-2234, HEIGHT: 15 FT 6 IN; DIAMETER: 5 FT 6 IN A/N: 470277 567619	D1503				
VESSEL, SEPARATOR, LOW PRESSURE, V-1753, HEIGHT: 30 FT 6 IN; DIAMETER: 8 FT 10 IN A/N: 470277 567619	D165				
DRUM, V-1816, WWS REBOILER CONDENSATE A/N: 470277 567619	D1334				
DRUM, V-1684, OFFGAS DCU CONDITIONER A/N: 470277 567619	D1335				
ACCUMULATOR, V-2161, STRIPPER OVERHEAD A/N: 470277 567619	D106				
ACCUMULATOR, V-1758, FRACTIONATOR OVERHEAD, HEIGHT: 12 FT ; DIAMETER: 4 FT 6 IN A/N: 470277 567619	D167			HAP: (10) [40CFR 63 Subpart CC, #2, 6-20-2013]	
KNOCK OUT POT, V-1760, AMINE ABSORBER FEED, HEIGHT: 10 FT; DIAMETER: 3 FT A/N: 470277 567619	D169				
KNOCK OUT POT, V-1762, AMINE ABSORBER OVERHEAD, HEIGHT: 10FT ; DIAMETER: 3 FT A/N: 470277 567619	D170				



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The operator shall comply with the terms and conditions set forth below:

DRUM, V-1765, WASH WATER, LENGTH: 13 FT 6 IN; DIAMETER: 5 FT 6 IN A/N: 470277 567619	D173				
DRUM, FLASH, V-1766, SOUR WATER, HEIGHT: 17 FT ; DIAMETER: 5 FT 6 IN A/N: 470277 567619	D174				
DRUM, V-1815, WWS CONDENSATE A/N: 470277 567619	D1336				
COMPRESSOR, C-134, RECYCLE GAS, 3000 HP A/N: 470277 567619	D176				H23.4
VESSEL, SEPARATOR, V-2049, HOT HIGH PRESSURE, HEIGHT: 18 FT; DIAMETER: 7 FT 6 IN A/N: 470277 567619	D1112				
DRUM, V-1814, WWS, HEIGHT: 30 FT 9 IN; DIAMETER: 12 FT A/N: 470277 567619	D502				
COLUMN, STRIPPER, V-2350, WASH WATER A/N: 470277 567619	D188				
FILTER, FEED, V-1808/09, 2 TOTAL, HEIGHT: 6 FT 9 IN; DIAMETER: 3 FT 6 IN A/N: 470277 567619	D1566				
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 470277 567619	D1449			HAP: (10) [40CFR 63 Subpart CC, #5A, 6-23-2003]	H23.16, H23.39, L341.x
PROCESS 8		SYSTEM 1			
HYDROCRACKING		HYDROCRACKING UNIT			
		Process Conditions: P13.1 System Conditions: S11.X , S13.4, S15.2, S15.3, S15.10, S31.1, S31.X			



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The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
REACTOR, V-993, HEIGHT: 58 FT 3 IN; DIAMETER: 10 FT A/N: 493279 575876	D371				
REACTOR, V-994, HEIGHT: 68 FT 10 IN; DIAMETER: 10 FT A/N: 493279 575876	D372				
REACTOR, V-995, HEIGHT: 74 FT 10 IN; DIAMETER: 8 FT 6 IN A/N: 493279 575876	D373				
DRUM, SURGE, V-996, HEIGHT: 28 FT; DIAMETER: 11 FT 6 IN A/N: 493279 575876	D340				
VESSEL, SEPARATOR, HIGH PRESSURE, V-997, HEIGHT: 34 FT; DIAMETER: 10 FT A/N: 493279 575876	D341				
VESSEL, SEPARATOR, LOW PRESSURE, V-998, HEIGHT: 26 FT; DIAMETER: 7 FT 6 IN A/N: 493279 575876	D342				
FRACTIONATOR, V-1001, HEIGHT: 144 FT; DIAMETER: 15 FT A/N: 493279 575876	D344				
VESSEL, STRIPPER, V-1002, HEAVY NAPHTHA, HEIGHT: 33 FT 6 IN; DIAMETER: 6 FT A/N: 493279 575876	D345				
VESSEL, STRIPPER, V-1003, MEDIUM NAPHTHA, HEIGHT: 31 FT 6 IN; DIAMETER: 6 FT A/N: 493279 575876	D1259				



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The operator shall comply with the terms and conditions set forth below:

ACCUMULATOR, V-1004, FRACTIONATOR REFLUX, LENGTH: 22 FT 6 IN; DIAMETER: 9 FT A/N: 493279 575876	D1260				
ACCUMULATOR, V-1005, FRACTIONATOR OVERHEAD, LENGTH: 18 FT; DIAMETER: 7 FT A/N: 493279 575876	D346			HAP: (10) [40CFR 63 Subpart CC, #2, 6-20-2013]	
ABSORBER, V-1006, LEAN OIL, HEIGHT: 50 FT; DIAMETER: 3 FT A/N: 493279 575876	D374				
COLUMN, DEPROPANIZER, V- 1007, HEIGHT: 106 FT; DIAMETER: 7 FT 6 IN A/N: 493279 575876	D347				
DRUM, V-1008, DEPROPANIZER REFLUX, LENGTH: 13 FT 6 IN; DIAMETER: 4 FT 6 IN A/N: 493279 575876	D348				
COLUMN, DEBUTANIZER, V- 1009, HEIGHT: 93 FT 6 IN; DIAMETER: 5 FT 6 IN A/N: 493279 575876	D349				
DRUM, V-1010, DEBUTANIZER REFLUX, HEIGHT: 14 FT; DIAMETER: 5 FT A/N: 493279 575876	D350				
DRUM, AMINE SCRUBBER FEED, V-2381, HEIGHT: 11 FT; DIAMETER: 4 FT 6 IN A/N: 493279 575876	D1652				
SCRUBBER, V-1011, AMINE, HEIGHT: 51 FT; DIAMETER: 5 FT 6 IN A/N: 493279 575876	D351				



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The operator shall comply with the terms and conditions set forth below:

DRUM, FLASH, V-1012, CONDENSATE, LENGTH: 10 FT; DIAMETER: 3 FT 6 IN A/N: 493279 575876	D375				
DRUM, FRACTIONATOR COMPRESSOR SUCTION, V-1695, HEIGHT: 8 FT; DIAMETER: 5 FT A/N: 493279 575876	D352				
POT, V-1025, DEPROPANIZER REBOILER CONDENSATE, LENGTH: 12 FT; DIAMETER: 1 FT 5 IN A/N: 493279 575876	D376				
POT, V-1026, DEBUTANIZER REBOILER CONDENSATE, LENGTH: 12 FT; DIAMETER: 1 FT 5 IN A/N: 493279 575876	D928				
VESSEL, SEPARATOR, V-2036, COKER GAS OIL, HEIGHT: 5 FT 2 IN; DIAMETER: 1 FT A/N: 493279 575876	D355				
VESSEL, SEPARATOR, V-1087, FCC GAS OIL SOLIDS, HEIGHT: 5 FT 2 IN; DIAMETER: 1 FT A/N: 493279 575876	D356				
VESSEL, COALESCER, V-1088 , V- 3619 , FCC GAS OIL, LENGTH: 10 FT; DIAMETER: 3 FT A/N: 493279 575876	D357				
VESSEL, COALESCER, V-1089 , V- 3620 , COKER GAS OIL, LENGTH: 10 FT; DIAMETER: 3 FT A/N: 493279 575876	D358				
VESSEL, EFFLUENT COALESCER, V-1090, LENGTH: 15 FT; DIAMETER: 5 FT A/N: 493279 575876	D1265				



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DRUM, INJECTION, V-1122, DIMETHYL DISULFIDE, LENGTH: 10 FT; DIAMETER: 3 FT A/N: 493279 575876	D359				
COMPRESSOR, C-93, RECYCLE GAS A/N: 493279 575876	D364				
COMPRESSOR, FRACTIONATOR NO.1 & 2, C-94/95, 2 TOTAL, RECIPROCATING TYPE A/N: 493279 575876	D930				
TOWER, DEA, V-1621, HEIGHT: 37 FT 6 IN; DIAMETER: 3 FT A/N: 493279 575876	D932				
KNOCK OUT POT, V-1622, LIQUID, HEIGHT: 7 FT 3 IN; DIAMETER: 1 FT 2 IN A/N: 493279 575876	D1266				
MIST ELIMINATOR, V-1623, HEIGHT: 9 FT; DIAMETER: 2 FT 6 IN A/N: 493279 575876	D933				
VESSEL, SEPARATOR, MEMBRANE, V-1624-38, 15 TOTAL, HEIGHT: 12 FT 5 IN; DIAMETER: 8 FT A/N: 493279 575876	D934				
COMPRESSOR, C-141, RECIPROCATING TYPE A/N: 493279 575876	D377				H23.4
DRUM, SECOND STAGE CHARGE, V-1965, LENGTH: 10 FT; DIAMETER: 3 FT A/N: 493279 575876	D1340				
KNOCK OUT POT, LIQUID, V- 1995, LENGTH: 10 FT; DIAMETER: 3 FT A/N: 493279 575876	D1341				



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The operator shall comply with the terms and conditions set forth below:

FILTER, V-1967, STRIPPED WATER, LENGTH: 10 FT; DIAMETER: 3 FT A/N: 493279 575876	D1342				
DRUM, SURGE, V-1966, WASH WATER, HEIGHT: 13 FT 6 IN; DIAMETER: 5 FT 6 IN A/N: 493279 575876	D1530				
DRUM, V-1972, FLASH, FOUL WATER, LENGTH: 10 FT; DIAMETER: 6 FT A/N: 493279 575876	D1531				
COMPRESSOR, HYDROGEN, C- 91/92, 2 TOTAL, RECIPROCATING TYPE A/N: 493279 575876	D245				
COMPRESSOR, C-98 A/N: 493279 575876	D102				
<u>COMPRESSOR, MAKEUP HYDROGEN BOOSTER, C-198, RECIPROCATING TYPE, 125 BHP</u> A/N 575876	<u>DX1</u>				
<u>COMPRESSOR, MAKEUP HYDROGEN BOOSTER, C-199, RECIPROCATING TYPE, 125 BHP</u> A/N 575876	<u>DX2</u>				
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 493279 575876	D1454			HAP: (10) [40CFR 63 Subpart CC, #5A, 6-20-2013]	H23.16, <u>H23.39</u>
PROCESS 19		SYSTEM 7			
PETROLEUM MISCELLANEOUS		<u>REFINERY INTERCONNECTION</u>			
		<u>System Conditions: S11.X, S31.X</u>			
Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions



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<u>FUGITIVE EMISSIONS, MISCELLANEOUS, REFINERY INTERCONNECTION PIPING, METERING SYSTEM, AND MISCELLANEOUS FUGITIVE COMPONENTS</u>	<u>DX3</u>			<u>HAP: (10) [40CFR 63 Subpart CC, #5A, 6-20-2013]</u>	<u>H23.39, L341.X</u>
<u>A/N: 575874</u>					
PROCESS 21		SYSTEM 1			
AIR POLLUTION CONTROL PROCESS		FLARE SYSTEM			
		System Conditions: <u>S11.X, S13.4, S18.2</u>			
Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
FLARE, ELEVATED WITH STEAM INJECTION, NO.2, Q-910, JOHN ZINK, MODEL STF-S-30, HEIGHT: 250 FT; DIAMETER: 2 FT 6 IN <u>A/N: 562263 575875</u>	C747				<u>B61.X, D12.4, D323.2, E193.1, H23.38, H23.42</u>
FLARE, ELEVATED WITH STEAM INJECTION, NO.1, Q-913, JOHN ZINK, MODEL STF-S-30, HEIGHT: 250 FT; DIAMETER: 2 FT 6 IN <u>A/N: 562263 575875</u>	C748				<u>B61.X, D12.4, D323.2, E193.1, H23.38, H23.42</u>
KNOCK OUT POT, V-847, FLARE NO. 2, WITH INTERNAL LIQUID SEAL, LENGTH: 24 FT; DIAMETER: 12 FT <u>A/N: 562263 575875</u>	D752	D1648 D1651			
KNOCK OUT POT, V-848, FLARE NO. 1, WITH INTERNAL LIQUID SEAL, LENGTH: 24 FT; DIAMETER: 12 FT <u>A/N: 562263 575875</u>	D753	D1648 D1651			
KNOCK OUT POT, V-2369, CRU-HTU NO. 1, LENGTH: 16 FT; DIAMETER: 8 FT <u>A/N: 562263 575875</u>	D750				



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The operator shall comply with the terms and conditions set forth below:

KNOCK OUT POT, V-630, CRU-HTU NO. 2, LENGTH: 19 FT; DIAMETER: 6 FT A/N: 562263 575875	D751				
KNOCK OUT POT, V-873, CRU NO. 3, LENGTH: 18 FT; DIAMETER: 9 FT A/N: 562263 575875	D754				
KNOCK OUT POT, V-934, DCU, LENGTH: 25 FT; DIAMETER: 12 FT A/N: 562263 575875	D755				
KNOCK OUT POT, V-951, HGU NO. 1, LENGTH: 40 FT; DIAMETER: 10 FT A/N: 562263 575875	D756				
KNOCK OUT POT, V-1018, HCU, LENGTH: 29 FT; DIAMETER: 14 FT 6 IN A/N: 562263 575875	D757				
KNOCK OUT POT, V-1431, ALKYLATION UNIT, LENGTH: 35 FT; DIAMETER: 11 FT A/N: 562263 575875	D758				
KNOCK OUT POT, V-1472, HTU NO. 3, LENGTH: 23 FT 8 IN; DIAMETER: 9 FT 3 IN A/N: 562263 575875	D759				
KNOCK OUT POT, V-1764, HTU-4, HEIGHT: 36 FT; DIAMETER: 13 FT A/N: 562263 575875	D172				
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 562263 575875	D1419			HAP: (10) [40CFR 63 Subpart CC, #5A, 6-20-2013]	H23.5

P13.1 All devices under this process are subject to the applicable requirements of the following rules or regulations:



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Contaminant	Rule	Rule/Subpart
Benzene	40CFR61, SUBPART	FF

[40CFR 61 Subpart FF, 12-4-2003]

[Processes subject to this condition: 2, 4, 8]

S11.X The operator shall comply with all applicable mitigation measures stipulated in the "Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan" document which is part of the AQMD Certified Final Environmental Impact Report dated "DATE TBD" or this facility.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with the applicable measures stipulated in the "Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan" document.

This condition shall only apply to equipment listed in Section H of this facility permit.

[CA PRC CEQA, 11-23-1970]

[Systems subject to this condition: Process 2, System 2, Process 4, System 7, Process 8, System 1; Process 19, System 7; Process 21, System 1]

~~S11.2 The following conditions shall apply to all refinery operation and related devices from this system:~~

~~The operator shall comply with all applicable mitigation measures stipulated in the "Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan" document which is part of the AQMD Certified Final Environmental Impact Report dated 15 oct 2001 for this facility~~

~~This condition shall only apply to equipment listed in Section H of this permit~~

~~[CA PRC CEQA, 11-23-1970]~~

~~[Systems subject to this condition : Process 4, System 7]~~



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The operator shall comply with the terms and conditions set forth below:

- S13.2 All devices under this system are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	40CFR60, SUBPART	QQQ

[40CFR60, SUBPART QQQ, 10-17-200]

[Systems subject to this condition: Process 4, System 7]

- S13.4 All devices under this system are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1123

[RULE 1123, 12-7-1990]

[Systems subject to this condition: Process 8, System 1; Process 4, System 7; Process 21, System 1]

- S15.2 The vent gases from all affected devices of this process/system shall be vented as follows:

All emergency vent gases shall be directed to the refinery flares (process 21, system 1) or flare gas recovery system (process 21, system 4) which may also include DCU Blowdown Compressor C-137 (device D68) except Devices IDs D898, D20, D910, D1268, D1269, D1280, D93, D94, D96, D1283, D1284, D1288, D1292, D219, D226, D1212, D275, D1256, D375, D928, D1267 & D916 that vent to the atmosphere.

This process/system shall not be operated unless the blowdown flare system is in full use and has a valid permit to receive vent gases from this system.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Systems subject to this condition: Process 4, System 7; Process 8, System 1]

- S15.3 The vent gases from all affected devices of this process/system shall be vented as follows:

All vent gases under normal operating conditions shall be directed to a vapor recovery system (process 21, system 3) consisting of compressors, D641, D642, D643, and/or



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D644, which can be operated independently to maintain a system vacuum that efficiently collects all vented gases or the flare gas recovery system (process 21, system 4).

This process/system shall not be operated unless the vapor recovery system (process 21, system 3) or flare gas recovery system (process 21, system 4) is in full use and has a valid permit to receive vent gases from this system.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Systems subject to this condition: Process 4, System 7; Process 8, System 1]

S15.10 The vent gases from all affected devices of this process/system shall be vented as follows:

All sour gases under normal operating conditions shall be directed to the amine absorber(s) located in this system.

This process/system shall not be operated unless the absorber(s) is in full use and has a valid permit to receive vent gases from this system.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Systems subject to this condition: Process 4, System 7; 8, System 1]

S18.2 All affected devices listed under this process/system shall be used only to receive, recover and/or dispose of vent gases routed from the system(s) or process(es) listed below, in addition to specific devices identified in the "connected to" column:

Crude Distillation Unit (Process: 1, System: 1 & 2)
Delayed Coking Unit (DCU) (Process: 2, System: 1, 3, 6 & 10)
Fluid Catalytic Cracking Unit (FCCU) (Process: 3, System: 1, 2, 4 & 5)
Hydrotreating Units (Process: 4, System: 1, 3, 5, 7 & 9)
Catalytic Reforming Units (Process: 5, System: 1, 3 & 5)
Hydrogen Generation Units (Process: 6, System: 1 & 3)
Hydrocracking Unit (Process: 8, System: 1)
Alkylation Unit (Process: 9, System: 1, 2 & 3)
Fuel Gas Treating System (Process: 12, System: 8)
Loading and Unloading (Process: 14, System: 2 & 3)
Pressurized Storage Tanks (Process: 15, System: 3)
Fuel Gas Mix System (Process: 19, System: 3)



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The operator shall comply with the terms and conditions set forth below:

Refinery Interconnection (Process: 19, System 7)

Isomerization Unit (Process: 23, System: 1)

[RULE 1303(a)(1)-BACT, 5-10-1996]

[Systems subject to this condition: Process 21, System 1]

S31.1 The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 347559, 347560, 347564, 366048, 366083, 376616, 376622, 376623, 376624, 376625, 376627, 376628, 381228, 435139, 457927, 501287 & 501288:

All open-ended valves shall be equipped with cap, blind flange, plug, or a second valve.

All pressure relief valves shall be connected to closed vent system or equipped with rupture disc.

All sampling connections shall be closed-purge, closed-loop, or closed-vent system.

All new valves in VOC service shall be of leakless type, except those specifically exempted by Rule 1173 or approved by the District in the following applications: heavy liquid service, control valves, instrument piping/tubing, applications requiring torsional valve stem motion, applications where failures could pose safety hazards (e.g. drain valves with valve stems in horizontal position), retrofits with space limitations, and valves not commercially available.

If 98.0 percent or greater of the new valve and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppm for two consecutive months, then the operator may revert to a quarterly inspection program with the approval of the executive officer. This condition does not apply to leakless valves.

The operator shall keep records of the monthly inspection (and quarterly where applicable), subsequent repair, and re-inspection, in a manner approved by the District.

The operator shall provide to the District, no later than 90 days after initial startup, a recalculation of the fugitive emissions based on actual components installed and removed from service. The operator shall also submit a complete, as built, piping and instrumentation diagram(s) and copies of requisition data sheets for all non-leakless type valves with a listing of tag numbers and reasons why leakless valves were not used.



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SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

All new components in VOC service as defined in Rule 1173, except valves and flanges, shall be inspected quarterly using EPA reference Method 21. All new valves and flanges in VOC service except those specifically exempted by Rule 1173 shall be inspected monthly using EPA Method 21.

For the purpose of this condition, leakless valve shall be defined as any valve equipped with sealed bellow or equivalent as approved in writing by the District prior to installation.

Components shall be defined as any valve, fitting, pump, compressor, pressure relief device, diaphragm, hatch, sight-glass, and meter, which are not exempt by Rule 1173.

All new components in VOC service, a leak greater than 500 ppm but less than 1,000 ppm measured as methane above background as measured using EPA Method 21, shall be repaired within 14 days of detection.

[RULE 1303(a)(1)-BACT, 5-10-1996]

[Systems subject to this condition: Process 4, System 7; Process 8, System 1]

S31.X The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 575874, 575876:

All new valves in VOC service shall be bellows seal valves except: (1) those specifically exempted by Rule 1173; (2) those in heavy liquid service as defined in Rule 1173; or (3) those approved by the District in the following applications: control valves, instrument piping/tubing, applications requiring torsional valve stem motion, applications where valve failure could pose safety hazard (e.g., drain valves with valve stems in horizontal position), retrofits/special applications with space limitations, and valves not commercially available.

All new components in VOC service as defined by Rule 1173, except those specifically exempted by Rule 1173, shall be distinctly identified from other components through their tag numbers (e.g., numbers ending in the letter "N2"), and shall be noted in the records.

All new open-ended lines shall be equipped with cap, blind flange, plug, or a second valve.



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The operator shall comply with the terms and conditions set forth below:

All new pressure relief valves shall be connected to closed vent system or equipped with a rupture disc.

All new pumps shall utilize double seals and be connected to a closed vent system.

All new compressors shall be equipped with a seal system with a higher pressure barrier fluid.

All new process drains shall be equipped with water seal, or a closed vent system and control device complying with the requirements of 40CFR60 Subpart QQQ Section 60.692-5.

All new valves and flanges in VOC service as defined by Rule 1173, except those specifically exempted by the rule, shall be inspected monthly using EPA Method 21.

If 98.0 percent or greater of the new non-bellows seal valves and the new flanges population inspected (as an aggregate) is found to leak gaseous or liquid volatile organic compounds at a rate less than 200 ppmv for two consecutive months, then the operator may change leak inspection interval for these components from monthly to quarterly with prior approval of the Executive Officer. The operator shall revert back to monthly inspection interval if less than 98.0 percent of these components is found to leak gaseous or liquid volatile organic compounds at a rate less than 200 ppmv.

The operator shall keep records of the monthly inspection, subsequent repair, and re-inspection, in a manner approved by the District. Records shall be kept and maintained for at least five years, and shall be made available to the Executive Officer upon request.

For all new components in VOC service as defined by Rule 1173, a leak greater than 200 ppm but less than 1,000 ppm, measured as methane above background using EPA Method 21, shall be repaired within 14 days of detection. A leak greater than 1,000 ppm shall be repaired according to Rule 1173.

The operator shall provide to the District, prior to initial startup, a list of all non-leakless type valves that were installed. The list shall include the tag numbers for the valves and reasons why leakless valves were not used. The operator shall also submit a complete as-built piping and instrumentation



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The operator shall comply with the terms and conditions set forth below:

diagram(s) and copies of requisition data sheets or field inspection surveys for all non-leakless type valves.

The operator shall provide to the District, no later than 90 days after initial startup, a recalculation of the fugitive emissions based on actual components installed and removed from service.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Systems subject to this condition: Process 4, System 7; Process 8, System 1; Process 19, System 7]

A63.XX The operator shall limit emissions from this equipment as follows:

<u>CONTAMINANT</u>	<u>EMISSIONS LIMIT</u>
<u>PM10</u>	<u>Less than or equal to 37 lbs in any one day</u>
<u>PM10</u>	<u>Less than or equal 0.00510 Lb/MMBtu</u>
<u>ROG</u>	<u>Less than or equal to 35 lbs in any one day</u>
<u>ROG</u>	<u>Less than or equal to 0.00482Lb/MMBtu</u>
<u>CO</u>	<u>Less than or equal to 174 lbs in any one day</u>
<u>CO</u>	<u>Less than or equal to 0.02397Lb/MMBtu</u>

The operator shall calculate the daily emissions and the emission rate in lb/MMBtu for ROG, PM10 and CO using the results of the most recent source test.

[RULE 1303(b)(2)-Offset, 5-10- 1996; RULE 1303(b)(2)-Offset, 12-6-2002,

[Devices subject to this condition : D33]

A63.YY The operator shall limit emissions from this equipment as follows:

<u>CONTAMINANT</u>	<u>EMISSIONS LIMIT</u>
<u>NOx</u>	<u>Less than or equal to 181.44 lbs/day</u>
<u>SOx</u>	<u>Less than or equal to 250 lbs/day</u>

The operator shall calculate the daily emissions for NOx and SOx using the the SCAQMD certified CEMS.

[CA PRC CEQA, 09-15-2015]

[Devices subject to this condition : D33]



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SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

A99.X The 18.40 lb/hr NOX emission limit(s) shall not apply during the heater startup, shutdowns or refractory dryout periods. For the purpose of this exception, each startup event shall not exceed 48 hours, not including refractory dryout period up to 48 additional hours and each shutown event shall not exceed 24 hours.

Written records of start-ups , refractory dryouts and shutdowns shall be maintained and made available upon request from the Executive Officer or his designee.

[RULE 2005, 5-6-2005, RULE 2005, 6-3-2011]

[Devices subject to this condition: D33]

A195.XX The 18.40 lbs/hr NOX emission limit(s) is averaged over rolling 24-hours.

This NOx hourly emission limit shall be calculated based on the measured NOx emissions using a certified RECLAIM CEMS.

RULE 2005, 5-6-2005, RULE 2005, 6-3-2011]

[Devices subject to this condition: D33]

A195.YY The 14.08 lbs/hr SOX emission limit(s) is averaged over rolling 24-hours.

This SOx hourly emission limit shall be calculated based on the measured SOx emissions using a certified RECLAIM CEMS.

RULE 2005, 5-6-2005, RULE 2005, 6-3-2011]

[Devices subject to this condition : D33]

B61.1 The operator shall not use fuel gas containing the following specified compounds:

Compound	ppm by volume
H2S greater than	160

The H2S concentration shall be based on a rolling 3-hour average.

[40CFR 60 Subpart J, 6-24-2008; CONSENT DECREE, 3-21-2001]]

[Devices subject to this condition: D33]

B61.X The operator shall not use fuel gas containing the following specified compounds:

COMPOUND	ppm by volume
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SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

H2S greater than _____ | 162

The 162 ppmv limit is averaged over three hours, excluding any vent gas resulting from an emergency malfunction, process upset or relief valve leakage

[40CFR 60 Subpart Ja, 6-24-2008]

[Devices subject to this condition: C747, C748]

D12.4 The operator shall install and maintain a(n) thermocouple or any other equivalent device to accurately indicate the presence of a flame at the pilot light.

The operator shall also install and maintain a device to continuously record the parameter being monitored.

[RULE 1118, 11-4-2005; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; 40CFR 60 Subpart A, 4-4-2014]

[Devices subject to this condition: C747, C748]

D29.XX The operator shall conduct source test(s) for the pollutant(s) identified below.

<u>Pollutant(s) to be tested</u>	<u>Required Test Method(s)</u>	<u>Averaging Time</u>	<u>Test Location</u>
<u>NOX emissions</u>	<u>Approved District Method</u>	<u>District –approved averaging time</u>	<u>Outlet of the SCR</u>
<u>SOX emissions</u>	<u>Approved District Method</u>	<u>District –approved averaging time</u>	<u>Outlet of the SCR</u>
<u>PM10</u>	<u>Approved District Method</u>	<u>District –approved averaging time</u>	<u>Outlet of the SCR</u>
<u>ROG</u>	<u>Approved District Method</u>	<u>District –approved averaging time</u>	<u>Outlet of the SCR</u>
<u>CO</u>	<u>District method 100.1</u>	<u>District –approved averaging time</u>	<u>Outlet of the SCR</u>

The test shall be conducted after AQMD approval of the source test protocol, but no later than 180 days after initial start-up. The AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the test shall record the fuel flow rate (CFH) and the flue gas flowrate.



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The operator shall comply with the terms and conditions set forth below:

The test shall be conducted when this equipment is operating at 80 percent or greater of the maximum design capacity.

For NO_x and SO_x, source test data may be substituted with CEMS data from a RECLAIM certified CEMS.

The test shall be conducted to demonstrate compliance with the emission limits specified in condition A63.XX and A63.YY for this equipment.

The test shall be conducted annually after the initial source test.

[RULE 1303(b)(2)-Offset, 5-10- 1996; RULE 1303(b)(2)-Offset, 12-6-2002, RULE 2005, 5-6-2005]

[Devices subject to this condition: D33]

D90.7 The operator shall continuously monitor the H₂S concentration in the fuel gases before being burned in this device according to the following specifications:

The operator may monitor the H₂S concentration at a single location for fuel combustion devices, if monitoring at this location accurately represents the concentration of H₂S in the fuel gas being burned in this device.

The operator shall use Gas Chromatograph meeting the requirements of 40CFR60 Subpart J to monitor the parameter.

The operator shall also install and maintain a device to continuously record the parameter being monitored.

[40CFR 60 Subpart J, 6-24-2008]

[Devices subject to this condition: D33]

D323.2 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a bi-weekly basis, at least, unless the equipment did not operate during the entire bi-weekly period. The routine bi-weekly inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard



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The operator shall comply with the terms and conditions set forth below:

procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

[**RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001**]

[Devices subject to this condition: C747, C748]

D328.1 The operator shall determine compliance with the CO emission limit(s) either: (a) conducting a source test at least once every five years using AQMD method 100.1 or 10.1; or (b) conducting a test at least annually using a portable analyzer and AQMD-approved test method. The test shall be conducted when the equipment is operating under normal conditions to demonstrate compliance with CO emission limit(s). The operator shall comply with all general testing, reporting, and recordkeeping requirements in sections E and K of this permit.

[**RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 407, 4-2-1982**]

[Devices subject to this condition: D33]



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SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

E54.9 The operator is not required to vent this equipment to the following equipment if any of the requirements listed below are met:

Device ID: C768 [SELECTIVE CATALYTIC REDUCTION]

Requirement number 1: The heater is in either start-up or shutdown mode.

Requirement number 2: The SCR inlet temperature is less than 550 Deg F.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition: D33]

E54.17 The operator is not required to vent this equipment to the following equipment if all of the requirements listed below are met:

Device ID: C768 [SELECTIVE CATALYTIC REDUCTION]

Requirement number 1: Bypass is allowed for activities directly related to repair, maintenance, and the resetting of the damper following a stack damper trip

Requirement number 2: The CEMS shall be fully operational and certified to the levels of emissions with and without bypass

Requirement number 3: Total periods of bypass do not exceed 240 hours per year

Requirement number 4: The operator shall submit an annual report to the District with a summary of the number of hours the SCR was bypassed, and the description of the reason for each bypass. The annual report is due March 1 of each year

[RULE 2012, 5-6-2005]

[Devices subject to this condition: D33]

E193.1 The operator shall operate and maintain this equipment according to the following specifications:

The operator shall comply with all applicable requirements specified in Section 60.18 of the 40 CFR60 Subpart A

[40CFR 60 Subpart A, 4-4-2014]

[Devices subject to this condition: C747, C748]



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The operator shall comply with the terms and conditions set forth below:

H23.3 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	40CFR60, SUBPART	J

[40CFR 60 Subpart J, 6-24-2008]

[Devices subject to this condition: D33]

H23.4 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	40CFR60, SUBPART	GGG

[40 CFR 60 Subpart GGG, 6-2-2008]

[Devices subject to this condition: D176, D377]

H23.5 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1173

[RULE 1173, 2-6-2009]

[Devices subject to this condition: D1419]

H23.16 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1173
VOC	40CFR60, SUBPART	GGG

[RULE 1173, 2-6-2009; 40 CFR 60 Subpart GGG, 6-2-2008]

[Devices subject to this condition: D1449, D1454]



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The operator shall comply with the terms and conditions set forth below:

H23.38 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
SOx	District Rule	1118

[**RULE 1118, 11-4-2005**]

[Devices subject to this condition: C747, C748]

H23.39 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1173
ROG	40CFR60, SUBPART	GGGa

[**RULE 1173, 2-6-2009; 40CFR 60 Subpart GGGa, 6-2-2008**]

[Devices subject to this condition: **D1449, D1454, DX3**]

H23.42 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
H2S	40CFR60, SUBPART	Ja

[**40CFR 60SubpartJa, 9-12-2012**]

[Devices subject to this condition: C747, C748]

L341.X **Within 90 days after startup of this equipment the following devices shall be removed from operation:**

(D96) FCCU Regenerator

(D112) CO Boiler

(D92) H-2 Steam Superheater

(D89) H-3 Fresh Feed Heater

(D90) H-4 Hot Oil Loop Reboiler

(D91) H-5 Fresh Feed Heater

(D1664) B-1 Startup Heater



**FACILITY PERMIT TO OPERATE
TESORO REFINING & MARKETING CO. LLC**

SECTION H: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS
The operator shall comply with the terms and conditions set forth below:

[[RULE 1313-, 12-7-1995]]

[Devices subject to this condition: DXXX1, DXXX2, D1449, DX3]

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